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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/724,553	12/01/2003	Edwin S. Romano	TOR7119	1862
44088	7590	06/07/2006	EXAMINER	
SEAN KAUFHOLD			SAID, MANSOUR M	
P. O. BOX 89626			ART UNIT	
SIOUX FALLS, SD 57109			PAPER NUMBER	
			2629	

DATE MAILED: 06/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/724,553	ROMANO ET AL.	
	Examiner	Art Unit	
	MANSOUR M. SAID	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/1/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 1 and 3 objected to because of the following informalities: In claims 1 and 13, line 5, the word "then" should be changed to "than". Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 1 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Regarding claims 1 and 13, the phrase "may be" renders the claim indefinite because it is unclear if the keyboard display received a video signal from the computer.
5. Claims 1 and 13 recites the limitation "said assembly" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dong (6,630,895 B1) in view of Chuang (6,967,831 B2).

As to claim 1, Dong teaches a computer input (keyboard, (figures 1-3)) and display (display, (figures 1-3, (20))) combination for selectively coupling to a computer (PC, (figure 4)) (column 2, 14-65), an assembly including: a housing having a top wall, a bottom wall, a back wall, a first side wall, a second side wall, and a front wall (figures 1-3); a processor (USB interface control circuit, (figure 4)) being mounted within said housing (figure 4, column 1, lines 40-45 and column 2, lines 20-25); an actuator being electrically coupled to said processor for selectively supplying electricity to processor (figures 1-4 and column 2, lines 2-29 and column 2, lines 60-65); a plurality of keys defining a computer keyboard (figures 1-3) being positioned in said top wall and being substantially flush with said top wall (figures 1-3, column 2, lines 30-41), each of said keys being electrically coupled to said processor (figures 1-4, column 2, lines 40-45, column 2, lines 20-25 and column 2, lines 60-65); a display (display, (figures 1-4, (20))) being mounted in said top wall (column 2, lines 29-36) and being substantially flush with said top wall (column 2, lines 29-36), said display (display, (figures 1-4, (20))) being electrically coupled to said processor (USB interface control circuit, (figure 4)) (column 1, lines 40-45 and column 2, lines 15-28); an interface being electrically coupled to said processor and selectively coupled to the computer for communication between said processor and the computer (figure 4 and column 2, lines 15-30); and wherein input from said plurality of keys may be received by said computer

and a video signal received from the computer may be displayed on said display (figures 1-4, column 1, lines 40-59 and column 2, lines 15-65).

Dong does not expressly disclose each of said keys comprising a touch sensitive key and said housing having a height from said top wall to said bottom wall less than $2\frac{1}{2}$ inches.

However, Chuang teaches a keyboard having a touch pad keys (figures 7-9 and column 3, 15-63), furthermore, Chuang fairly teaches a keyboard housing having a height less than a $2\frac{1}{2}$ inches (keyboard, (3, 5 & 7-8)) is a flat keyboard, which can folded and insert into a pocket of the user (figures 3-8 and column 2, lines 30-36 and column 5, lines 30-31).

Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate Chuang's keyboard having a touch keys and a flat housing into Dong's keyboard so as to provide a foldable keyboard employing touch panel, which has compact size and comes in handy (column 2, lines 1-5).

Dong and Chuang don't disclose a keyboard's housing having a height a specific size, such as, less than $2\frac{1}{2}$ inches.

However, it is a design choice to make a keyboard height having less than $2\frac{1}{2}$ inches, unless it shows such specific size/height is an advantage feature, so as to increase the versatility of the input device.

A change in size is generally recognized as being within the level of ordinary skill in the art. In re Rose, 105 USPQ 237 (CCPA 1955).

As to claim 12, Dong teaches said interface including a first transceiver and second transceiver each adapted for sending and receiving wireless transmissions (figures 1-4 and column 2, lines 14-65), said first transceiver being electrically coupled to said processor (figures

1-4 and column 2, lines 14-65), said second transceiver being removably electrically coupled to the computer (figures 1-4 and column 2, lines 14-65).

8. **Claims 2-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dong in view of Chuang as applied to claim1 above, and further in view of Ozolins (2004/0100447 A1).**

As to claims 2-11, Dong and Chuang disclose all claimed limitations except that LCD display, foot pads being attached to said bottom wall, and light emitters being mounted within said housing, and said apertures being positioned adjacent to said sound emitter.

However, disclose touch sensitive key (figures 1 & 3, column 2, paragraph 0015 and column 7, paragraph 0067), LCD display (column 2, paragraph 0015), foot pads being attached to said bottom wall (devices attached to or integrated with the keyboard, (column 2, paragraph 0015)), column 4, paragraph 0032 and column 6, paragraph 0056), and light emitters being mounted within said housing (column 8, paragraph 0074, and said apertures (figures 1 & 3, (102)) being positioned adjacent to said sound emitter (figures 1 & 3 and column 5, paragraph 0049).

Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate Ozolins's keyboard having different feature into Dong's keyboard so as to perform a controller function of proving signals relating to the state of the switches to couple computers or other devices (column 0010, paragraph 0010).

9. **Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dong (6,630,895 B1) in view of Ozolins (2004/0100447 A1).**

As to claim 13, Dong teaches a computer input (keyboard, (figures 1-3)) and display (display, (figures 1-3, (20)) combination for selectively coupling to a computer (PC, (figure 4)) (column 2, 14-65), an assembly including: a housing having a top wall, a bottom wall, a back wall, a first side wall, a second side wall, and a front wall (figures 1-3); a processor (USB interface control circuit, (figure 4)) being mounted within said housing (figure 4, column 1, lines 40-45 and column 2, lines 20-25); a plurality of keys defining a computer keyboard (figures 1-3) being positioned in said top wall and being substantially flush with said top wall (figures 1-3, column 2, lines 30-41) , each of said keys being electrically coupled to said processor (figures 1-4, column 2, lines 40-45, column 2, lines 20-25 and column 2, lines 60-65); a display (display, (figures 1-4, (20)) being mounted in said top wall (column 2, lines 29-36) and being substantially flush with said top wall (column 2, lines 29-36), said display (display, (figures 1-4, (20)) being electrically coupled to said processor (USB interface control circuit, (figure 4)) (column 1, lines 40-45 and column 2, lines 15-28), a space between each said keys (see figures 1-3); an interface being electrically coupled to said processor and selectively coupled to the computer for communication between said processor and the computer (figure 4 and column 2, lines 15-30); and wherein input from said plurality of keys may be received by said computer and a video signal received from the computer may be displayed on said display (figures 1-4, column 1, lines 40-59 and column 2, lines 15-65), said interface including a first transceiver and second transceiver each adapted for sending and receiving wireless transmissions (figures 1-4 and column 2, lines 14-65), said first transceiver being electrically coupled to said processor (figures

1-4 and column 2, lines 14-65), said second transceiver being removably electrically coupled to the computer (figures 1-4 and column 2, lines 14-65), a sound emitter being mounted within said housing (column 1, lines 27-32), (edges of the top wall being sealed (clearly shows in claims 1-3) and housing having a height from said top to said bottom wall (figures 1-3).

Dong does not disclose a keyboard's housing having a height a specific size, such as, less than 2 ½ inches.

However, it is a design choice to make a keyboard height having less than 2 1/2 inches, unless it shows such specific size/height is an advantage feature, so as to increase the versatility of the input device.

A change in size is generally recognized as being within the level of ordinary skill in the art. In re Rose, 105 USPQ 237 (CCPA 1955).

Dong does not expressly disclose touch sensitive key, LCD display, foot pads being attached to said bottom wall, and light emitters being mounted within said housing, and said apertures being positioned adjacent to said sound emitter.

However, Ozolins disclose touch sensitive key (figures 1 & 3, column 2, paragraph 0015 and column 7, paragraph 0067), LCD display (column 2, paragraph 0015), foot pads being attached to said bottom wall (devices attached to or integrated with the keyboard, (column 2, paragraph 0015)), column 4, paragraph 0032 and column 6, paragraph 0056), and light emitters being mounted within said housing (column 8, paragraph 0074, and said apertures (figures 1 & 3, (102)) being positioned adjacent to said sound emitter (figures 1 & 3 and column 5, paragraph 0049).

Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate Ozolins's keyboard having different feature into Dong's modified device so as to perform a controller function of providing signals relating to the state of the switches to couple computers or other devices (column 0010, paragraph 0010).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ohashi (4,916,699) teaches touch panel sensitive display.

Yates et al. (2001/0040551 A1) teaches a hand held remote computer.

Chan et al. (2006/0011461 A1) teaches a computer keyboard backlighting.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mansour M. Said whose telephone number is 571-272-7679. The examiner can normally be reached on Monday through Thursday from 8:30-6:00 P.M. The examiner can also be reached on alternate Friday from 8:30 a.m. to 5:00 p.m. EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard A. Hjerpe whose telephone number is 571-272-7691.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to: 571-273-8300 (for Technology Center 2600 only)

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Mansour M. Said

May 26/06



RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
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